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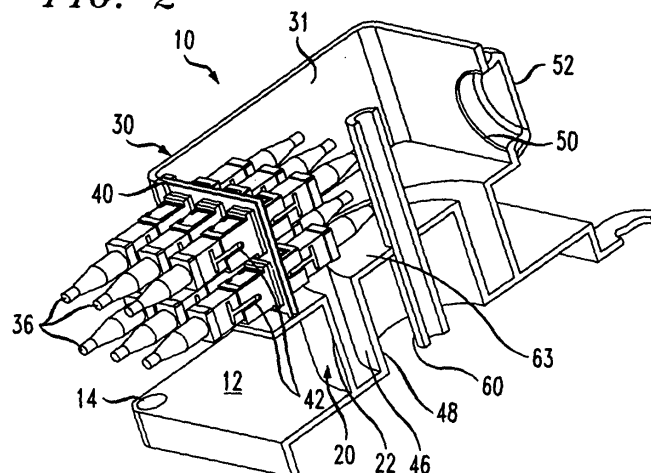
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(54) **Wall-mountable optical fiber and cable management apparatus**

(57) Optical fiber and cable management apparatus (10) includes a base (12) for mounting on a wall or other surface at a subscriber premises, and a drum region (20) extending axially upward from the base (12). The drum region (20) includes an outer cylindrical wall (22) for supporting a length of a first fiber optic cable wound about the outer wall, an inner cylindrical wall (48) disposed radially inward of the outer wall (22) to define an annular

fiber routing region (46) between the two walls (22,48), and a cable entry port in the outer wall (22) for receiving an end portion of the first fiber optic cable so that fibers of the cable may be routed through the fiber routing region (46). An interface compartment (30) disposed atop the drum region (20) is constructed to interface a first set of fibers routed within the compartment (30), with a second set of fibers associated with a second fiber optic cable that is routed to the apparatus.

FIG. 2





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EUROPEAN SEARCH REPORT

Application Number
EP 07 01 8409

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 976 510 A (DAVILA DAN I [US] ET AL) 11 December 1990 (1990-12-11) * the whole document *	1,8,9, 12,13	INV. G02B6/44
Y		14,15,17	
A		16	
X	----- WO 93/22695 A (EDERA EGISTO [IT]) 11 November 1993 (1993-11-11) * the whole document *	1,8,9, 14,15	
Y		17	
A		16	
X	----- DE 38 41 607 A1 (SIEMENS AG [DE]) 13 June 1990 (1990-06-13) * the whole document *	5,10,11	
A		6,7	
A		16	
X	----- EP 0 343 057 A (COMMISSARIAT ENERGIE ATOMIQUE [FR]) 23 November 1989 (1989-11-23) * the whole document *	5	
A		6,7	TECHNICAL FIELDS SEARCHED (IPC)
A		16	G02B
A	----- US 4 913 369 A (LIA RAYMOND A [US] ET AL) 3 April 1990 (1990-04-03) * the whole document *	5-7	
A	----- FR 2 739 460 A (LEMESLE MARCEL [FR]) 4 April 1997 (1997-04-04) * the whole document *	5-7	
Y	----- EP 1 041 417 A (SIECOR OPERATIONS LLC [US]) 4 October 2000 (2000-10-04) * the whole document *	14,15	
	----- -/--		
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 August 2008	Examiner Frisch, Anna Maria
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.82 (P04C01)



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 07 01 8409

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	WO 03/073819 A (FCI AMERICAS TECHNOLOGY INC [US]) 12 September 2003 (2003-09-12) * the whole document *	14, 15	
A	FR 2 586 822 A (LIGNES TELEGRAPH TELEPHON [FR]) 6 March 1987 (1987-03-06) * the whole document *	16	
Y	WO 2006/113817 A (ADC TELECOMMUNICATIONS INC [US]; REAGAN RANDY [US]; GNIDEK JEFFREY [US]) 26 October 2006 (2006-10-26) * the whole document *	17	
Y	US 2006/008231 A1 (REAGAN RANDY [US] ET AL) 12 January 2006 (2006-01-12) * the whole document *	17	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 August 2008	Examiner Frisch, Anna Maria
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- ☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1,2,3,4,8,9,12,13

Subject 1 relates to an optical fibre and cable management casing where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, to the strain relief of the wound fibre, to the connector panels, to the kind of connectors to be mated, and to the inlet for a further connectorised fibre.

2. claims: 5-7

Subject 2 also relates to an optical fibre and cable management where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, and to a turning mechanism for the drum.

3. claims: 10,11

Subject 3 also relates to an optical fibre and cable management casing where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, and to an additional fibre channel formed at the exterior of the casing and on top of the base.

4. claims: 14,15

Subject 4 also to an optical fibre and cable management casing where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, and to the possibility to wind a fibre on the outer circular wall of the drum.

5. claim: 16

Subject 5 also relates to an optical fibre and cable management casing where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, and to a splice box incorporated into the base.



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

6. claim: 17

Subject 6 also relates to an optical fibre and cable management casing where a drum is mounted on a base for receiving a length of an optical fibre, with a connector panel on top of the drum for connecting the drummed fibre with an external connectorised fibre cable, and to a park block for non-connected connectors.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 01 8409

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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29-08-2008

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4976510	A	11-12-1990	NONE	
WO 9322695	A	11-11-1993	EP 0593505 A1	27-04-1994
			IT 1254342 B	14-09-1995
			JP 6508700 T	29-09-1994
			US 5457764 A	10-10-1995
DE 3841607	A1	13-06-1990	US 5069523 A	03-12-1991
EP 0343057	A	23-11-1989	DE 68908266 D1	16-09-1993
			DE 68908266 T2	17-02-1994
			FR 2631323 A1	17-11-1989
			JP 2013577 A	17-01-1990
			US 5022600 A	11-06-1991
US 4913369	A	03-04-1990	NONE	
FR 2739460	A	04-04-1997	NONE	
EP 1041417	A	04-10-2000	BR 0001214 A	31-10-2000
			CA 2302068 A1	01-10-2000
			JP 2000304976 A	02-11-2000
WO 03073819	A	12-09-2003	US 2003165298 A1	04-09-2003
FR 2586822	A	06-03-1987	NONE	
WO 2006113817	A	26-10-2006	AU 2006236319 A1	26-10-2006
			CA 2606770 A1	26-10-2006
			EP 1875285 A2	09-01-2008
			KR 20080005432 A	11-01-2008
US 2006008231	A1	12-01-2006	NONE	